Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

Claim 1: (currently amended) A method of operating ~~for removing a fluorine residue in~~ a deposition process chamber, the method comprising:

placing a substrate in said process chamber;

depositing a film on said substrate, said depositing leaving a deposition residue on an interior surface of said chamber;

cleaning said deposition residue from said interior surface by creating a fluorine-containing plasma in said chamber, said fluorine-containing plasma leaving a fluorine-containing contaminant on said interior surface;

supplying an oxygen-containing gas into the process chamber;

supplying a hydrogen-containing gas into the process chamber;

producing a plasma of a mixture of the oxygen-containing ~~oxygen-containing~~ gas and the hydrogen-containing gas, so that the plasma reacts with the fluorine-containing contaminant ~~residue~~ to form a fluorine-containing material ~~fluorine-containing gas~~; and

removing ~~evacuating~~ the fluorine-containing material ~~fluorine-containing gas~~ from the process chamber.

Claim 2: (currently amended) The method of claim 1, wherein the hydrogen-containing gas is selected from a group consisting of NH_3 and H_2.

Claim 3: (original) The method of claim 1, wherein the oxygen-containing gas is selected from a group consisting of N_2O, O_2 and air.

Claim 4: (currently amended) The method of claim 1, wherein producing the plasma ~~exothermically~~ generates H_2O~~, supplying~~ and supplies heat to increase a rate of ~~the~~ reaction between the H_2O ~~plasma~~ and the fluorine-containing contaminant ~~residue~~.

Claim 5: (currently amended) The method of claim 1, wherein producing the plasma produces an ion flux to an interior surface of the process chamber, so that the ion

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flux results in an ion-enhanced chemical reaction between the plasma and the fluorine-containing contaminant ~~residue~~.

Claim 6: (currently amended) The method of claim 1, wherein producing the plasma generates a plurality of coordinately and electronically unsaturated radicals and ions that react ~~reacts~~ with the fluorine-containing contaminant ~~residue~~.

Claim 7: (original) The method of claim 1, wherein the mixture of the oxygen-containing gas and the hydrogen-containing gas is 70 mol % N_2O/NH_3.

Claim 8: (original) The method of claim 7, wherein a flow rate of NH_3 into the process chamber is 1,500 sccm.

Claim 9: (original) The method of claim 7, wherein a flow rate of N_2O into the process chamber is 3,500 sccm or less.

Claim 10: (original) The method of claim 7, wherein producing the plasma uses a high frequency RF power of 3,000W, and a pressure of the process chamber is 2 Torr.

Claim 11: (original) The method of claim 1, wherein the mixture of the oxygen-containing gas and the hydrogen containing gas is 50 mol % N_2O/NH_3.

Claim 12: (original) The method of claim 11, wherein a flow rate of NH_3 into the process chamber is 1,500 sccm.

Claim 13: (original) The method of claim 11, wherein a flow rate of the N_2O into the process chamber is 3,500 sccm or less.

Claim 14: (original) The method of claim 11, wherein producing the plasma uses a high frequency RF power of 3,000W, and a pressure of the process chamber is 2 Torr.

Claim 15: (original) The method of claim 1, wherein the mixture of the oxygen-containing gas and the hydrogen containing gas is 52 mol % O_2/NH_3.

Claim 16: (original) The method of claim 15, wherein a flow rate of NH_3 into the process chamber is 2,000 sccm.

Claim 17: (original) The method of claim 15, wherein a flow rate of the N_2O into the process chamber is 2,170 sccm or less.

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Claim 18: (original) The method of claim 15, wherein producing the plasma uses a high frequency RF power of 2,000W, and a pressure of the process chamber is 3 Torr.

Claim 19: (original) The method of claim 1, further comprising supplying an inert gas to stabilize the plasma.

Claim 20: (original) The method of claim 19, wherein the inert gas is selected from a group consisting of He, Ne, Ar, and Kr.

Claim 21: (original) The method of claim 1, wherein the process chamber is a chemical vapor deposition chamber.

Claim 22: (new) The method of Claim 1 wherein the fluorine-containing material is a fluorine-containing gas.

Claim 23: (new) The method of Claim 1 wherein the hydrogen-containing gas is NH_3 and the fluorine-containing material comprises an ammonium fluoride.

Claim 24: (new) A method of operating a deposition process chamber, the method comprising:

placing a substrate in said process chamber;

depositing a film on said substrate, said depositing leaving a deposition residue on an interior surface of said chamber;

cleaning said deposition residue from said interior surface by creating a fluorine-containing plasma in said chamber, said fluorine-containing plasma leaving a fluorine-containing contaminant on said interior surface;

creating a plasma that generates H_2O and heat in said process chamber, said H_2O reacting with the fluorine-containing contaminant in the presence of said heat to form a fluorine-containing material; and

removing the fluorine-containing material from the process chamber.

Claim 25: (new) The method of Claim 24 wherein the fluorine-containing material is a fluorine-containing gas.

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Claim 26: (new) The method of Claim 24 wherein the hydrogen-containing gas is NH_3 and the fluorine-containing material comprises an ammonium fluoride.